

DAIRY

A COMMODITY FACT SHEET COMPILED BY THE LOUISIANA AG IN THE CLASSROOM PROGRAM



HISTORY

In the early days, cattle were used to produce milk for the family that owned them. As people gradually moved into the cities, farmers began to buy more cows and produce enough milk to sell to their neighbors. In the early 1930s the importance and size of the dairy industry grew rapidly. Refrigeration, pasteurization and homogenization are some of the technological advances that helped the dairy industry to grow.

Today, the size of dairy farms varies in the number of cows, but most are still family-owned. A cow that is raised to produce milk is called a dairy cow. In Louisiana, the most common kind of dairy cow is the Holstein, which is black and white. One dairy cow can eat as much as 20 pounds of grain and 30 pounds of hay per day. This enables them to produce as much as 12 gallons of milk per day. Most farms are located in the southeast part of the state in Tangipahoa, Washington and St. Helena parishes. Dairies also are found in the northwest part of the state.

PRODUCTION

Milk is sold by the producer in quantities called “hundredweights,” or 100-pound units. A gallon of milk is equal to eight pounds. Most of the milk produced from cows in Louisiana goes into fluid milk and ice cream. Some is used for cheese, yogurt and sour cream. In other states milk is often sold in powdered form. Powdered milk or its separated proteins can be added to a wide variety of foods, such as baby formula and macaroni and cheese mix.

Today, most milk is pasteurized and homogenized before it is sold. Pasteurization is the process of heating liquids for the purpose of destroying viruses and harmful organisms such as bacteria, protozoa, molds, and yeasts. The process was named after its inventor, French scientist Louis Pasteur. The first pasteurization test was completed by Pasteur and Claude Bernard on April 20, 1862.

Homogenization of milk prevents or delays the natural separation of milk. The fat in milk normally separates from the water and collects at the top. Homogenization is the process of breaking up that fat into smaller sizes so that it no longer separates from the milk, allowing the sale of non-separating 2% and whole milk. This is accomplished by forcing the milk at high pressure through small orifices.

Milk is often referred to as nature’s most perfect food. It contains almost every element needed in human diets, including calcium, protein, minerals and vitamins.



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commodity_handout_sheets.pdf](http://www.aitcla.org/files/commodity_handout_sheets.pdf)

TRY THIS ACTIVITY YOURSELF!

ICE CREAM LABORATORY



MATERIALS

(for a group of three people)

- Measuring spoons and measuring cup
- 1 quart zippered plastic bag
- $\frac{1}{4}$ cup sugar
- $\frac{1}{2}$ teaspoon vanilla
- 1 cup 2% milk
- 1 cup half & half
- Duct tape
- 1 gallon zippered plastic bag
- 2 lbs. ice
- $\frac{1}{2}$ cup water
- 1 cup rock salt
- Paper towels
- Scissors
- Plastic spoons
- Flavorings and toppings (*optional*)

1. Divide students into groups of three.
2. In the quart-sized zippered bag, place sugar, vanilla, milk and half & half. Close bag and massage bag gently to mix contents well. When contents are mixed, open one corner of the bag and squeeze the air out completely. Reseal the bag and cover seal with duct tape.
3. Place quart bag in gallon bag. Add ice around small bag then rock salt and water. Seal this bag with duct tape.
4. Note the time. Toss the bag gently in your hands, using paper towels to protect your hands from the cold as well as protect the mixture from your warm hands. Continue to toss and massage the bag gently to help ensure adequate mixing of contents.

In about ten minutes, the mixture should be frozen. Note the exact time your bag freezes. Cut the gallon bag off at the top and dispose of the saltwater and ice mixture.
5. Wipe the outside of the small bag clean with paper towels. Cut the bottom corner of the bag at an angle. Squeeze a small amount of the ice cream into a cup and measure the temperature.

After gathering all data, squeeze the bag to release serving sizes of ice cream into cups for each student. Add toppings and be neat, but have a good time!